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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,092	02/23/2005	Toshiaki Kimura	OGA-013	3275

20374 7590 01/03/2007  
KUBOVCIK & KUBOVCIK  
SUITE 710  
900 17TH STREET NW  
WASHINGTON, DC 20006

EXAMINER
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TOSCANO, ALICIA

ART UNIT	PAPER NUMBER
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1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/525,092

Applicant(s)

KIMURA ET AL.

Examiner

Alicia M. Toscano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/31/05 2/23/05.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-9, 26-28 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura (JP 2001-131827, English translation provided).

Nishimura discloses polylactic acid based flat yarns. Said yarns comprise polylactic acid with molecular weight 90,000-110,000 [0005], and a lubricant in the amount of 0.5-5 wt% [0007]. The lubricant may be ethylene oleic amide, and the like [0005], or an alkyl-substituted fatty acid monoamide, as required by Claims 1 and 5. As the composition requirements have been met, Examiner finds the properties of Claims 2, 3, 4, 6, 7, 8, 9 and 31 to be inherent. A flat yarn able to be woven into a fabric is produced (abstract), as required by Claims 26-28.

2. Claims 1-11, 26, 29 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Obuchi (US 6417294).

Obuchi discloses films and articles formed from polyester compositions containing a nucleating agent. The polyester is polylactic acid having a molecular weight of 90,000-500,000 (Column 9 Line 39). The nucleating agent is 0.1-10 wt% of the composition (Column 6 Line 46) and comprises ethylenebislauramide, hexamethylenebisoleamide, and the like (Column 10 Lines 22-49), as required by Claims 1 and 5. As the composition requirements have been met, it is the Examiners position that the properties of Claims 2,3,4,6,7,8,9 and 31 are met. Filaments, or a fiber product, produced from the composition (Column 16 Line 51) and sheets, or nonwoven fabrics, are disclosed in Column 16 Line 58), as required by Claims 26 and 29.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-11, 16, 19-21, 23 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan (WO 0212395, US 6710135 is used as and Equivalent English document) in view of Nakata (WO/1999/063001, US 2002/0094444 is used as an Equivalent English Translation).

Tan discloses polylactic acid resin compositions. Said compositions are used for nonwoven fabrics and yarn (Column 3 Lines 25-26). Said polylactic acid has a molecular weight from 2000-500,000 (Column 6 Line 60) and may contain a lubricant (Column 7 Line 44). Tan does not disclose specific lubricants for the polyester composition.

Nakata discloses biodegradable polyester resins. Said polyester resins may be polylactic acid [0158]. Said compositions are useful for fibers [0022] and may contain a lubricant [0204]. Lubricants are disclosed to prevent blocking during processing [0221]. The melting point of solid lubricants is disclosed to be less than 160C [0217]. Lubricants are added in an amount from 0.05-5 wt% [0218] and may be a bisamide of fatty acids, monoamide fatty acids, and the like [0227].

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Tan, the lubricants of Nakata, in order to prevent blocking when processing the polyester resin. Thus the limitations of Claims 1 and 5 are met.

The fiber of Tan meets the limitations of Claims 10 and 26. The fiber may have false twist texturing (Column 12 Line 40), and may be a staple fiber (Column 12 Line 39)

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as required by Claims 16 and 21. Knitted and woven fabrics are disclosed in Column 12 Lines 33-34, nonwoven fabrics are as discussed above, and use of the composition for carpet is disclosed in Column 12 Line 58, as required by Claims 27-30.

As the composition requirements have been met, Examiner finds the property requirements of Claims 2, 3, 4, 6, 7, 8, 9, 11, 19, 20, 23 and 31 are met.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolstad (US 6114495) in view of Nakata.

Kolstad discloses polylactic acid polymers have a MW between 25,000 and 200,000 (abstract). The polylactic acid polymer may include a lubricant (Column 19 Line 28). Kolstad further discloses the lubricant to include fatty acid esters (Column 22 Line 26).

Nakata discloses biodegradable polyester resins. Said polyester resins may be polylactic acid [0158]. Said compositions are useful for fibers [0022] and may contain a lubricant [0204]. Lubricants are disclosed to prevent blocking during processing [0221]. The melting point of solid lubricants is disclosed to be less than 160C [0217]. Lubricants are added in an amount from 0.05-5 wt% [0218] and may be a fatty acid ester or a fatty acid amide [0216], which include bisamide of fatty acids, monoamide fatty acids, and the like [0227].

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Tan, the lubricants of Nakata, in order to prevent blocking when processing the polyester resins and since fatty acid esters and fatty acid amides are

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recognized functional equivalents in the art. Thus the limitations of Claims 1 and 5 are met.

As the composition requirements have been met, Examiner finds the property requirements of Claims 2, 3, 4, 6, 7, 8, 9 and 11 and 31 are met.

5. Claims 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura or Obuchi or Kolstad in view of Tan.

Nishimura, Obuchi and Kolstad include elements of the invention as discussed above. Nishimura, Obuchi and Kolstad do not disclose the use of crimping the polyester fiber.

Tan discloses elements of the invention as discussed above. Tan discloses crimping a yarn in order to impart desirable properties and characteristics on the yarn (Column 12 Lines 26-36). Tan further discloses fabrication of false twist yarns, which is a crimping technique (Column 12 Line 40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Nishimura or Obuchi or Kolstad, the use of false twist texturing as a crimping technique, as taught by Tan, in order to impart desired properties and characteristics to the fiber.

As the composition requirements have been met, Examiner finds the properties of the fiber to be inherent.

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6. Claims 13, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan, or, Nishimura or Obuchi or Kolstad in view of Tan, in further view of Anderson (US 4009513).

Nishimura, Obuchi, Kolstad and Tan include elements of the invention as discussed above. Nishimura, Obuchi, Kolstad and Tan do not include the use of fluid texturing to crimp the fiber, or the use of wound fibers.

Anderson discloses the production of yarn. Said yarn is disclosed to be wound on a beam prior to subsequent processing. Crimping, or texturing yarn, is disclosed in Column 1 Lines 34-41. Anderson discloses fluid texturing to be functionally equivalent to false twist texturing (Column 6 Lines 52-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Nishimura or Obuchi or Kolstad or Tan, the use of fluid texturing, as taught by Anderson, since this is recognized in the art as being functionally equivalent to false twist texturing.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Tan, Nishimura, Obuchi or Kolsad the use of winding the fiber on a beam, as taught by Anderson, in order to aid in handling the fiber for future processing.

7. Claims 12, 14, 17, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura or Obuchi or Kolstad or Tan in view of Yamakita (US 2003/0079297).



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Nishimura, Obuchi, Kolstad and Tan includes elements of the invention as discussed above. Nishimura, Obuchi, Kolstad and Tan do not include the use of a smoothing agent to coat their fibers.

Yamakita discloses agents for coating biodegradable yarns (abstract). The biodegradable yarn may be polylactic acid [0003]. The yarns are coated with an aqueous solution in order to improve lubricity, cohesion and to prevent fuzzing and breaking (abstract). The solution comprises a polyether and/or polyether ester polymer [0007]-[0009] and [0021], or a smoothing agent. Said polyether component may comprise an alcohol, like methyl alcohol, butyl alcohol and the like [0024] and an alkylene oxide having 2-4 carbon atoms [0025], as required by the above Claims.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Nishimura or Obuchi or Kolstad or Tan, the use of a polyether smoothing agent, as taught by Yamakita, in order to improve lubricity, cohesion and to prevent fuzzing and breaking.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Toscano whose telephone number is 571-272-2451. The examiner can normally be reached on Monday to Friday 8:30 AM to 5 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMT

  
MARGARET G. MOORE  
PRIMARY PATENT EXAMINER  
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